

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
9 October 2003 (09.10.2003)

PCT

(10) International Publication Number  
**WO 03/082742 A3**

(51) International Patent Classification<sup>7</sup>: C01G 9/02,  
23/02, 25/02, 1/02

(21) International Application Number: PCT/IB03/01177

(22) International Filing Date: 26 March 2003 (26.03.2003)

(25) Filing Language: Italian

(26) Publication Language: English

(30) Priority Data:  
FI2002A000052 28 March 2002 (28.03.2002) IT

(71) Applicant (*for all designated States except US*):  
CONSORZIO INTERUNIVERSITARIO PER LO  
SVILUPPO DEI SISTEMI A GRANDE INTERFASE  
C.S.G.I. [IT/IT]; Piazza San Marco, 4, I-50121 Firenze  
(IT).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): BAGLIONI, Piero  
[IT/IT]; Via Mimmole, 192/A, I-50010 Fiesole (IT). DEI,  
Luigi [IT/IT]; Via G. Carducci 16, I-50121 Firenze (IT).  
FRATONI, Laura [IT/IT]; Via Machiavelli, 39, I-59100  
Prato (IT). LO NOSTRO, Pierandrea [IT/IT]; Via Carlo  
D'Angio, 42, I-50126 Firenze (IT). MORONI, Michelan-  
gelo [IT/IT]; Via E. Vasarri, 7, I-52025 Montevarchi (IT).

(74) Agent: GERVASI, Gemma; Notarbartolo & Gervasi  
S.p.A., Corso di Porta Vittoria 9, I-20122 Milan (IT).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,  
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Declaration under Rule 4.17:**

— *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

— *with international search report*

(88) Date of publication of the international search report:  
24 December 2003

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: PROCESS FOR THE PREPARATION OF NANO- AND MICRO-PARTICLES OF GROUP II AND TRANSITION METALS OXIDES AND HYDROXIDES, THE NANO- AND MICRO-PARTICLES THUS OBTAINED AND THEIR USE IN THE CERAMIC, TEXTILE AND PAPER INDUSTRIES

(57) Abstract: A process for the preparation of particles of group II and transition metals oxides and hydroxides is described, which provides a homogeneous phase synthesis step by a double exchange reaction and, in the case of oxides, the subsequent calcination of the corresponding hydroxides; the particles thus obtained and their use for surface coatings of ceramic, textile and paper materials are also described.

WO 03/082742 A3